GILIC, Miladin, sanitetski pukovnik, dr.; KRUNIC, Radovan, sanitetski potpukovnik, dr.

Cold as a factor responsible for skin lesions in the army. Vojnosanit. pregl. 19 no.1:42-45 Ja '62.

1. Vojnomedicinska akademija u Beogradu, Klinika za kozne i polne bolesti.
(FROSTBITE) (MILITARY MEDICINE)

S

GILIC, M., pukovnik prof. dr.

Cutaneous eruptions following bromids therapy (bromoderma vegetans-tuberosum). Med.Glas.17 no.11/12:460-463 N-D '63.

1. Klinika za kozne i polne bolesti VMA [Vojnomedicinska Akademija] u Beogradu (Nacelnik: pukovnik prof. dr. M. Gilic).

RADULESCU G.; BADILESCU, I.; GILICI, A.

Polarographic determination of ethyl mercury chloride in Granodin. Rev chimie Min petr 15 no. 3: 164-165 Mr '64.

1. Laboratorul de control tehnic si cercetari al Combinatului chimic, Borzesti.

GILICZ, Bela, okleveles [illegible]

Significance of the hydraulics of boring mud in the increase of the mechanical velocity of the rotary-type deep borings. Bany lap 33 no.7:493-494 Jl '60.

1. Dunantuli Koolajfurasi Uzem, Nagykanizsa.

GILICZ, Bela, okleveles banyamernok

Significance of the hydraulics of boring mud in the increase of the mechanical velocity of the rotary-type deep borings. PT.2. Bany lap 93 no.8:544-552 Ag '60.

1. Dunantuli Koolajfurasi Uzem, Nagykanizsa.

GILICZ, Bela, okleveles banyamernok, fotechnologus; KOMORNOKI, Laszlo, okleveles banya - es kozgazdasagi mernok; NEMETH, Ferenc, okleveles banyamernok.

Hydraulics of rotary drilling in case of the circulation of high-speed jets and penetration of low-pressure strata. Bany lap 96 no.10:694-709 O'63.

1. Orszagos Koolaj - es Gazipari Troszt Dunantuli Koolajfurasi Uzem, Nagykanizsa; "Banyaszati Lapok" szerkeszto bizottsagi tagja (for Gilicz). 2. Orszagos Koolaj - es Gazipari Troszt Dunantuli Koolajfurasi Uzeme muszaki osztalyvezetoje, Szolnok (for Nemeth).

DIACONU, C.; BALASESCU, L.; GILIEN, I.; MITA, P.

Yearly precipitation variation factor and its relation to the yearly flow variation factor in Rumania. Studii hidrol 2:47-64 '62.

CILICZ, Bela, okl.banyamernok.

Importance of the hydraulics of boring mud in increasing the mechanical speed of deep boring of rotary systems. (To be contd.) Bany lap 93 no.6:412-425 Je '60.

1. Dunantuli Koolajfurasi Uzem, Nagykanizsa.

GILICZ, Bela, okl. banyamernok

Importance of the hydraulics of boring mud in increasing the mechanical speed of deep boring of rotary system. (To be contd.)
Bany lap 93 no. 7:482-494 Jl '60.

1. Dunantuli Koolajfurasi Uzem. Nagykanizsa.

GILICZ, Bela, okl. banyamernok

Importance of the hydraulics of boring mud in increasing the mechanical speed of deep boring of rotary system. Bany lap 93 no. 8:544-552. Ag '60.

1. Dunantuli Koolajfurasi Uzem, Nagykanizsa.

KALNIN'SH,A.I.[Kalnins,A.], akademik, red.; GILLER, S.A., akademik, red.; SHIMANSKAYA,M.V., kand. khim. nauk, red.; DYMARSKAYA, O., red.; PILADZE, E., tekhn. red.

[Resources of pentosan-containing raw material in the U.S.S.R.] Resursy pentozansoderzhashchego syr'ia v SSSR. Riga, Izd-vo Akad. nauk Latviiskoi SSR, 1960. 161 p. (MIRA 14:12)

1. Vsesoyuznyy uchenyy sovet po probleme ispol'zovaniya pentozansoderzhashchego syr'ia. 2. Akademiya nauk Latviyskoy SSR (for Kalnin'sh, Giller).

(Pentosans)

GILILOVA, B.G.; SHKOL'NIK, S.S.

Early diagnosis of tuberculous meningitis in adults and its therapy with streptomycin. Klin. med., Moskva 31 no.4:32-35 Apr 1953.
(CIML 24:4)

1. Of Leningrad Scientific-Research Tuberculosis Institute.

GILILOVA, B.G.; SHKOL'NIK, S.S.

Early diagnosis of tuberculous meningitis in adults and its therapy with streptomycin. Klin.med. 34 no.4:32-35 Ap '53. (MLRA 6:7)

1. Leningradskiy nauchno-issledovatel'skiy tuberkuleznyy institut.
(Meninges--Tuberculosis) (Streptomycin)

S/196/63/000/002/024/026
E194/E155

AUTHORS: Gilim, A.S., Zhilkin, P.S., Lazarev, N.S., Khudyakov, V.V., and Yanvarev, A.I.

TITLE: A grid-control system for a thyratron rig of a 12-phase rectifier

PERIODICAL: Referativnyy zhurnal, Elektrotekhnika i energetika, no.2, 1963, 5, abstract 2 K 24. (Dokl. 4-y Mezhvuz. konferentsii po primeneniyu fiz. i matem. modelirovaniya v razlichn. otraslyakh tekhn. Collection 4. (Reports of the 4th Intercollegiate Conference on the Application of Physical and Mathematical Modeling in various Branches of Technology. Collection 4). Moscow, 1962, 433-442).

TEXT: Existing grid-triggering systems for the control of thyratrons and mercury valves are briefly analysed. Disadvantages of the electromagnetic and electronic systems are noted and the requirements applicable to valves of multi-phase rectifiers are formulated. A semiconductor system of grid control of mercury thyratrons developed by the authors is described. It is based on

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the principle of combining the functions of phase displacement and peak formation into a common unit. The phase displacement part forms a saw-tooth waveshape voltage with steep front and flat straight tail. The phase of impulse formation, which controls the peak-generating circuit, is determined by the instant of coincidence between the instantaneous value of the saw-tooth voltage and the voltage of the d.c. control signal. The phase of the triggering impulse may be altered by changing the value of the control voltage. The saw-tooth voltage generator is based on a circuit with a single semiconductor triode and RC-chain. The signal corresponding to the difference between the saw-tooth and control voltage is amplified in a single stage on a semiconductor triode whose impulse is differentiated by a transformer. The narrow impulse obtained by differentiation controls the starting of a multi-vibrator with a single stable condition. The multi-vibrator forms a rectangular triggering signal, whose duration may be controlled by altering the C and R parameters in the phase chain of the first semiconductor triode, since the signal is formed in an unstable condition of the multi-vibrator. To avoid interrupting the operation of the multi-vibrator at the instant of

A grid-control system for a thyratron.. S/196/63/000/002/024/026
E194/E155

blocking of the output amplifier, a divider cascade in the form of an amplifier operating in key condition is inserted between them. The divider cascade can be used to measure and adjust the output parameters of the control unit for triggering impulses with the output amplifier blocked. The output amplifier applies triggering impulses through the divider impulse transformer to the thyratron grid circuits. The voltages in different sections of the circuit are applied from eight different rectifiers based on semiconductor diodes each in three-phase bridge circuit. The system is constructed as 3-channel units, each to control the grids of three thyratrons. Tests on the system showed it to be practically without inertia. The control angle does not alter on changing the synchronizing voltage by 50% or on changing the supply voltage from +10 to -20%.
3 figures. 2 references.

[Abstractor's note: Complete translation.]

Card 3/3

L 36340-66 EWT(1)/EWT(m)/T/FSS-2/EWP(t)/ETI IJP(c) JD

ACC NR: AP6015779 (A,N) SOURCE CODE: UR/0043/66/030/005/0840/0842

AUTHOR: Polivanov, V. V.; Gerchikova, I. I.; Markov, M. Ye.; Gilim, N. N. 53 B

ORG: none

TITLE: A precision electronic dc current regulator /Report, Fifth All-Union Conference on Electron Microscopy held in Sumy 6-8 July 1965/

SOURCE: AN SSSR. Izvestiya. Seriya fizicheskaya, v. 30, no. 5, 1966, 840-842

TOPIC TAGS: current stabilization, direct current, electron microscopy

ABSTRACT: The authors describe a series-type vacuum tube current regulator capable of supplying 0.4 to 0.8 A of regulated current with a drift after a 40 minute warm up of less than one part per million per minute and not more than five parts per million per hour. The instrument featured a type 70-AMTsG-1.3 battery for the reference voltage, a precision potentiometer with which the current could be adjusted in steps of 2 to 4 parts per million, a dc amplifier of which the first stage was a parallel balanced circuit each branch of which was connected as a compensation circuit with a large cathode resistor, and preregulation of the heater current. By using this regulator to supply the objective lens of a type EMV-150 electron microscope it was possible for the first time to achieve a resolving power of 5 A with a Soviet microscope. Orig. art. has: 4 figures.

SUB CODE: 20, 09/ SUBM DATE: 00/ ORIG REF: 000/ OTH REF: 000

Card 1/1

USSR /Chemical Technology. Chemical Products and Their Application I-16

Treatment of natural gases and petroleum. Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31949

Author : Rumyantseva Z. A., Gilimzanova F.M., Sterin Kh. Ye.

Inst : Academy of Sciences Tadzhik SSR

Title : Specific Hydrocarbon Composition of High-Sulfur Gasoline of Direct Distillation

Orig Pub: Tr. AN TadzhSSR, 1955, 41, 45-58

Abstract: The combined method of Landsberg-Kazanskiy for the study of specific hydrocarbon composition is applied in the study of gasoline obtained by

Card 1/3

USSR /Chemical Technology. Chemical Products and Their Application I-16

Treatment of natural gases and petroleum. Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31949

direct distillation of Tadzhik petroleum from the Kzyl-Tumshuk deposit. Forty two specific hydrocarbons have been identified, 10 of which were determined quantitatively; 4 specific hydrocarbons and a mixture of cyclopentane and 2,2-dimethyl butane, have been isolated, and the quantitave content of these hydrocarbons in the gasoline has been determined. As a result of adsorptive separation there have been isolated from the gasoline 15% of aromatic hydrocarbons, including about 5.5% toluene. It was found that the composition of the gasoline comprises mostly low-branching paraffin cyclopentane and cyclo-

Card 2/3

USSR /Chemical Technology. Chemical Products and Their Application I-16

Treatment of natural gases and petroleum. Motor fuels. Lubricants.

Abs Jour: Referat Zhur - Khimiya, No 9, 1957, 31949

hexane hydrocarbons with short, unbranched side chains. Sulfur compounds are concentrated in the aromatic portion of the gasoline.

Card 3/3

GILINOV, L.D.

Production management without subdivision by shops. Leg.prom. 17 no.4:16-17 Ap '57. (MLRA 10:4)

1. Direktor fabriki imeni Baumana.
(Hosiery industry--Management)

GRINSKAYA, E. A.

Defended his Dissertation for Candidate of Chemical Sciences in the Institute of General and Inorganic Chemistry, Academy of Sciences USSR, Moscow, 1953

Dissertation: "Crystal-Chemical Investigation of Complex Compounds Containing the Nitro Group"

SO: Referativnyy Zhurnal Khimiya, No. 1, Oct. 1955 (W/29995, 25 Apr 54)

BOKIY, G.B.; GILINSKAYA, E.A.

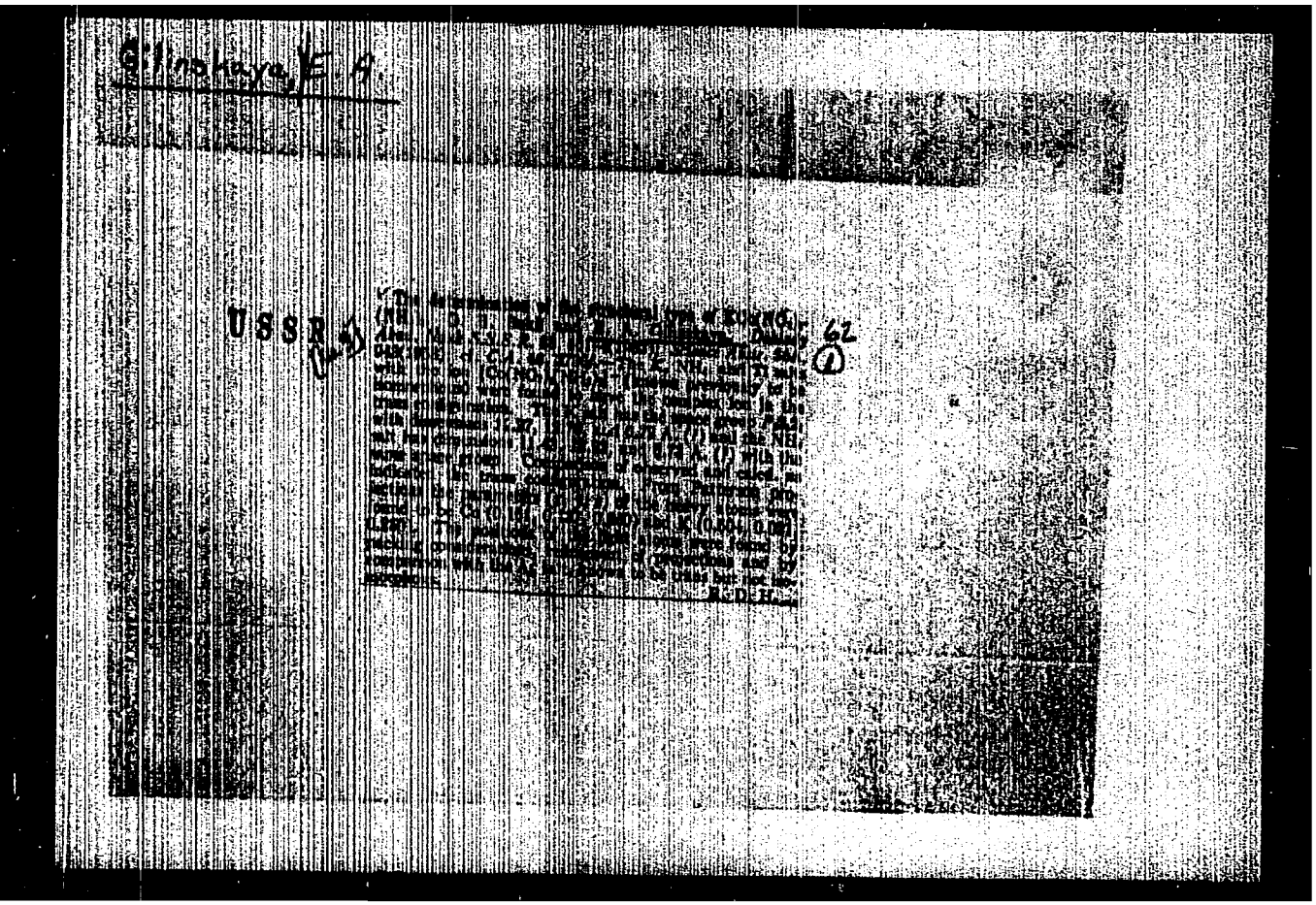
Structure of the complex ion $[Co(NO_2)_4NH_3)_2]^-$. Izv. AN SSSR. Otd.khim. nauk. no.2:238-241 Mr-Ap '53. (MLRA 6:5)

1. Institut obshchey i neorganicheskoy khimii imeni N.S. Kurnakova Akademii nauk SSSR. (Ions) (Chemical structure)

GILINSKAYA, E.A.

X-ray examination of $Ag[Co(No_2)_4(NH_3)_2]$. Vest.Mosk.un. 8 no.5:133-137 My '53. (MLRA 6:8)

1. Kafedra kristallografii i kristallokhimii. (Silver compounds)



SOV/70-4-2-18/36

AUTHORS: Gilinskaya, E.A. and Poray-Koshits, M.A.

TITLE: On the Crystal Structure of the Intra-Complex Compound $Ni[(C_2H_5O)_2PS_2]_2$ (Preliminary Communication)

O kristallicheskoy strukture vnutrikompleksnogo soyedineniya $Ni[(C_2H_5O_2)_2PS_2]_2$ (Predvaritel'noye soobshcheniye)

PERIODICAL: Kristallografiya, 1959, Vol 4, Nr 2, pp 241-242 (USSR)

ABSTRACT: The new type of compounds of dialkyldithiophosphoric acid with a series of transition elements is more stable than would be theoretically expected. The above compound was taken as an example. Crystals from aqueous solution were dark violet and showed the forms {010}, {110}, {001}. The unit cell was found to have a = 8.85, b = 10.35, c = 10.36 kX, $\beta = 102.5^0$, Z = 2 with the space group $P2_1/a$. Patterson and Fourier projections onto the xy0 plane were made. Ni atoms are at the centres of inversion. S atoms form a square about the Ni with a Ni-S of 2.2 kX which corresponds to covalent bonds.

Card1/2

SOV/70-4-2-18/36

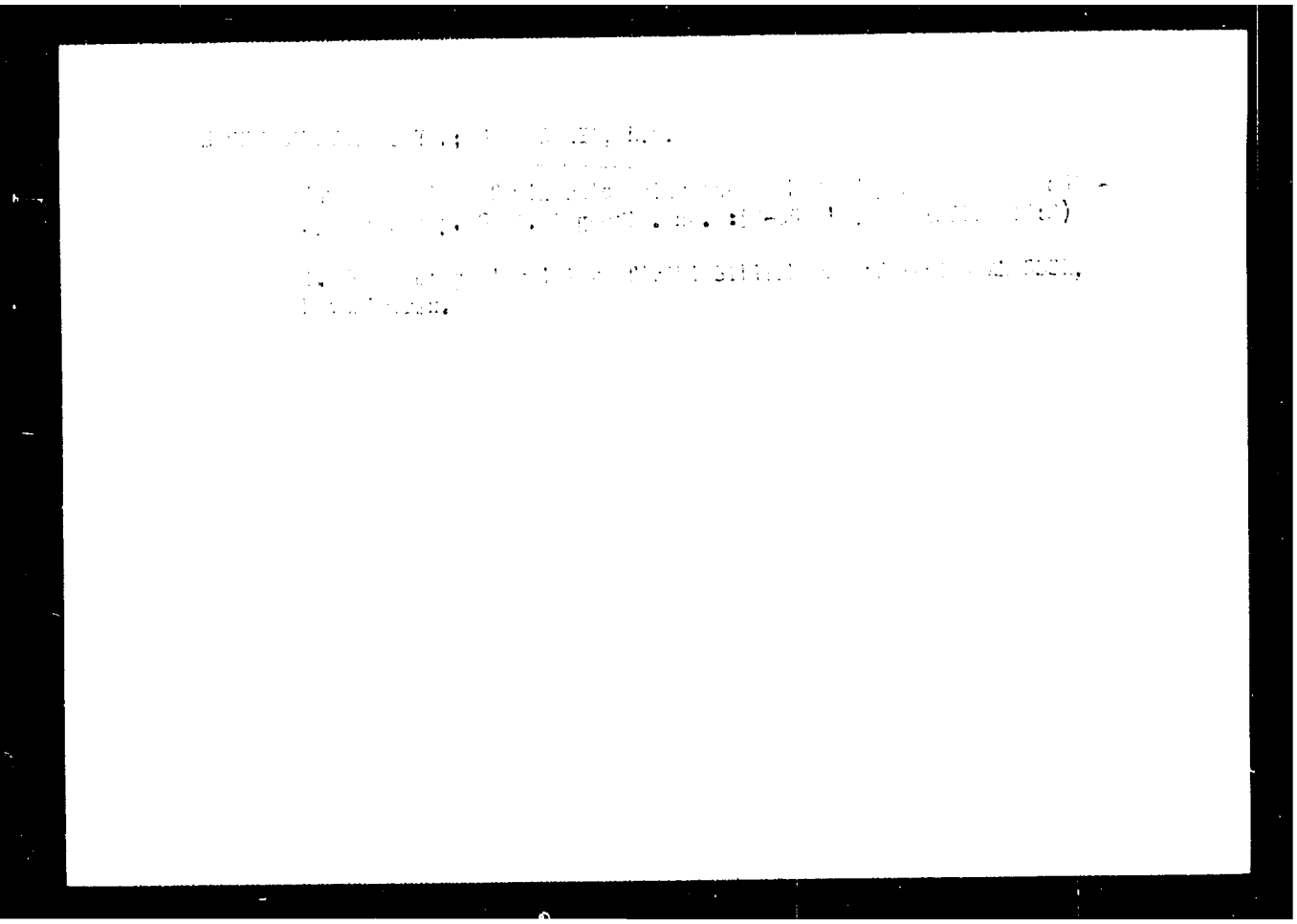
On the Crystal Structure of the Intra-complex Compound $Ni[(C_2H_5O)_2PS_2]_2$

Refinements are being carried out. A.I. Busev prepared the material. There are 5 Soviet references.

ASSOCIATION: Moskovskiy gosudarstvennyy universitet imeni M.V. Lomonosova (Moscow State University imeni M.V. Lomonosov)

SUBMITTED: December 17, 1959

Card 2/2



S/048/62/026/007/019/030
B125/B104

AUTHORS: Mogilevskiy, A. N., Abramson, I. S., Slavnyy, V. A., and Gilinskaya, M. Ya.

TITLE: Development of a photoelectric method for the successive determination of elements

PERIODICAL: Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya, v. 26, no. 7, 1962, 921-924

TEXT: The general block diagram of the apparatus, constructed at the laboratory of the Commission for Spectroscopy AS USSR, for successively determining the elements is shown in Fig. 2. When the Fabry-Perot étalon (2), used as wavelength standard, is illuminated, the light from a light source (1) with continuous spectrum and from light source (3) is directed to the entrance slit of a spectral apparatus (4). In the focal plane it produces an image with regularly alternating maxima and minima. The counter (7) counts the light maxima when the exit slit is displaced along the spectrum and stops the motor (8) of a turning mechanism as soon as the slit reaches the preset wavelength. The intensity

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Development of a photoelectric ...

ratio between analysis line and standard is measured by a tube electrometer. The programming device (6) controls the entire apparatus. The recording circuit (5) is based on an electrometer with dynamic capacitor. The punch cards for controlling the apparatus contain information on the wavelength of the line used for the analysis (number of interference maxima), times of annealing and exposure, the ideal properties of the light source for determining a given element in the specimen to be analyzed, and the order in which the elements are to be determined. There are 4 figures and 1 table.

ASSOCIATION: Komissiya po spektroskopii Akademii nauk SSSR
(Commission for Spectroscopy of the Academy of Sciences USSR)

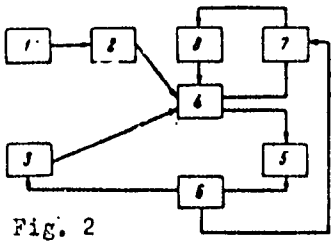

Fig. 2

NOVIKOV, A.S., kand.khim.nauk; KALUZHENINA, K.F., kand.tekhn.nauk; GILINSKAYA, N.S.; KAZAKOV, A.V.; Prinimala uchastiye ARKHANGEL'SKAYA, M.I.

Production of heat-resistant rubbers based on butadiene-nitrile polymers. Trudy NIIRP no. 7:25-33 '60. (MIRA 14:1)
(Resins, Synthetic)

GILINSKAYA, N.S.

USSR

DOGADKIN, B. A., and TARASOVA, Z. N., Moscow Institute of Fine Chemical Technology imeni M. V. Lomonosov [No initials]- "Influence of vulcanization structure on physical and mechanical properties of vulcanizates" (Session II)

KUZ'MINSKIY, A. S., LYUBIMSKAYA, L. I., PEL'TSMAN, L. S., Scientific Research Institute of Rubber Industry, Moscow [No initials]- "Influence of mechanical stresses on the ageing of vulcanized rubbers" (Session VIII)

KOVRIGV, A. S., GILINSKAYA, N. S., DYUMAYEVA, T. N., GRIBACHEVA, A. V., MIKHEL'MAN, Z. N., and GADIL-OGLY, F. A., Scientific Research Institute of Rubber Industry, Moscow [No initials]- "Investigation of amine vulcanization of SKF-26 fluoroco-polymer" (Session II)

REZNIKOVSKIY, M. M., and EROKHIN, G. I., Scientific Research Institute of Tire Industry, Moscow - "Special features of the mechanism of abrasion of high-elastic materials" (Session V)

13

Report to be submitted for the 4th Rubber Technology Conference, London, England, 22-25 May 1962.

34132
S/138/62/000/002/002/009
A051/A126

11.2214
15.9206

AUTHORS: Novikov, A.S.; Galil-Ogly, F.A.; Gilinskaya, N.S.

TITLE: "Wighton A" (Vayton) type fluoro-copolymer vulcanizates, containing benzoyl peroxide

PERIODICAL: Kauchuk i rezina, no. 2, 1962, 4 - 10

TEXT: Data concerning the effects of mastication, mixing and vulcanization on the properties of rubber-like fluoro-copolymer vulcanizate peroxides of the "Wighton A" type, are derived. The fluoro-copolymer vulcanization with benzoyl peroxide is carried out in 2 steps: molding in the vulcanization press under pressure and thermostating in air without pressure. The vulcanizing action of the benzoyl peroxide is based on the removal of hydrogen atoms from the polymer chains, forming macro-radicals, and subsequent recombination of the latter, leading to the formation of a spatial lattice. Experiments revealed that in mastication and mixing on the rollers, a mechanical destruction of the molecular chains takes place in the "Wighton A" type fluoro-copolymer, forming polymer radicals which are subsequently deactivated from their interaction with compounds constituting part of the solution's composition, or they are recombined, forming

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"Wighton A" (Vayton) type fluoro-copolymer ....

branched or partially laced structures. The first processes take place primarily at temperatures of from 20 - 30°C, the second at 60 - 80°C. The properties of the fluoro-copolymer vulcanizate peroxides depend on the mixing procedure on the rollers (polymer loading, roller temperature, space between the rollers, etc.). The mixing conditions should be kept constant in order to form vulcanizates with reproducible properties. The vulcanization of the fluoro-copolymer with the benzoyl peroxide begins at temperatures over 80°C, thus, the molding should be carried out at temperatures not exceeding 80°C. After the first stage of vulcanization of the fluoro-copolymer with the benzoyl peroxide, the vulcanizates are characterized by a sparse spatial lattice, a low tensile strength, high residual deformation in compression. The second stage of vulcanization leads to an improvement of the mechanical properties of the vulcanization. In thermal aging of the peroxide vulcanizates, the rate of either the structuralizing or destruction processes is increased, depending on the temperature and mix filling. Articles made of the "Wighton A" type fluoro-copolymer, vulcanized with benzoyl peroxide, can be used over long periods of time at 250°C and for shorter periods at 300°C. There are 6 tables, 6 figures and 10 references: 2 Soviet-bloc and 8 non-Soviet-bloc. The references to the two most recent English language publications read as follows: J.G. Smith, Rubb. World, 140, no. 2, 263

Card 2/3

34132
S/138/62/000/002/002/009
A051/A126

"Wighton A" (Vayton) type fluoro-copolymer ....

(1959) E. Tufts, Rubb. Age, 84, no. 6, 463 (1959).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

Card 3/3

[illegible]/003/002/[illegible]
[illegible]/A125

11.2214

AUTHORS: Novikov, A. S., Galil-Ogly, F. A., G[illegible], M. S., Nudel'man, [illegible]

TITLE: Vulcanization of Wighton-type fluorocopolymers with hexamethylenediamine

PERIODICAL: Kauchuk i rezina, 1962, no. 3, [illegible]

TEXT: Results are submitted of a study [illegible] the vulcanization processes (1st and 2nd) of the Wighton-type fluorocopolymer, using hexamethylenediamine (HMDA). Work began in 1958 and was completed in 19[illegible]. In the first vulcanization stage the formation kinetics of the vulcanization [illegible]ttice in the copolymer and the quantity of bound amine were determined. Experiments showed that the Wighton-type fluorocopolymer vulcanizes with hexamethylenediamine at low temperatures (from 10°C); the degree of lacing increases with an increase in concentration of the hexamethylenediamine and temperature. During the vulcanization process with the hexamethylenediamine, a hydrogenfluoride salt is formed, indicating a splitting off of the HF from the polymer and the formation of double bonds in the chain. The HMDA salt decomposes, forming a free amine, in the presence of metal oxides, or under conditions allowing the dissociation of the hydrogen-

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Vulcanization of...

fluoride salt, with HF forming from the reaction medium. The latter explains the activating action of the metal oxides on the vulcanization process of using hexamethylenediamine. A reaction scheme is recommended. In the second vulcanization stage (heating in an air thermostat at 200°C), partial destruction of the fluoropolymer with the HMDA vulcanizates takes place. The resistance to accumulation of residual deformations and the stability of other mechanical properties are increased. One of the main reasons of destruction is moisture, introduced into the mixture with the ingredients and formed in the reaction: $MgO + 2HF \rightarrow MgF_2 + H_2O$. The destruction process is affected by the moisture of the surrounding medium as well as by that contained in the vulcanizate proper. The HF is found further to affect the destruction of the vulcanizate in thermostatic treatment, causing a tear of the transverse bonds of the following type: $\sim N-(R)-N=\sim$, which, in turn, are not acid-resistant. An increase of accumulation resistance of the fluoropolymer vulcanizates to residual deformation and ... stabilization of other mechanical properties during the second stage of vulcanization is explained by the elimination of moisture and volatile products when heated in air. There are 4 figures, 4 tables, 11 references: 3 Soviet-bloc and 8 non-Soviet-bloc. The reference to one of the most recent English-language publication reads as follows:

Card 2/3

Vulcanization of...

S/138/62/000/003/002/00[illegible]
A051/A126

A. H. Moran, R. P. Kane, J. F. Smith, Ind. Eng. Chem., 51, no. 7, 831 (1959).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti
(Scientific Research Institute of the Rubber Industry)

Card 3/3

X

40295

S/081/62/000/014/029/039
B166/B144

15.9300

AUTHORS: Novikov, A. S., Kaluzhenina, K. F., Gilinskaya, N. S., Kazakov, A. V.

TITLE: The manufacture of heat-resistant rubbers based on butadiene nitrile-rubber

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 14, 1962, 646, abstract 14P332 (Tr. N.-i in-ta rezin. prom-sti, sb. 7, 1960, 25-33)

TEXT: The influence of stabilizers on the thermal oxidation ageing of CKH (SKN) at 150°C was determined from the magnitude of the induction period of oxidation and from the character of structural changes in the oxidized rubber (due to the change in swelling and solubility of the rubber when oxidized). The stabilizers tested can be arranged in the following order according to the magnitude of the induction period: dinaphthyl-p- phenylene diamine > Resamine C > diphenylol propane > mercapto benzimidazole (I) and "fatty red C" > dimethylphenyl-p-oresol (II) and Neozone D (III) > nitroso-β-naphthol. Films containing II, I and III had the highest solubility. The smallest degree of structuration is observed in the presence of I and II. For heat-resistant rubbers it is preferable

Card 1/2

S/081/62/000/014/029/039
B166/B144

The manufacture of...

to use mineral fillers, in particular Al, Mg and Ca silicates. Heat-resistant rubbers can be got by using "silicate rubbers" filled with amorphous SiO_2 in the process of coagulation from the latex. [Abstracter's note: Complete translation.]

Card 2/2

NOVIKOV, A.S.; GALIL-OGLY, F.A.; GILINSKAYA, N.S.

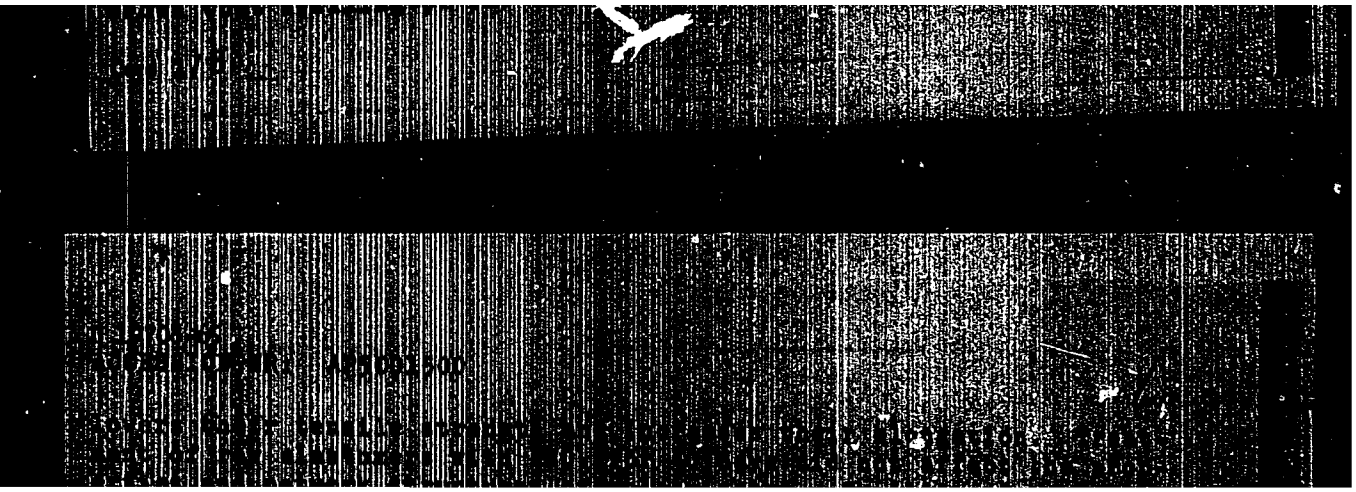
Vulcanizates of fluorocopolymers of the "Viton A" containing benzoyl peroxide. Kauch.i rez. 21 no.2:4-10 F '62. (MIRA 15:2)

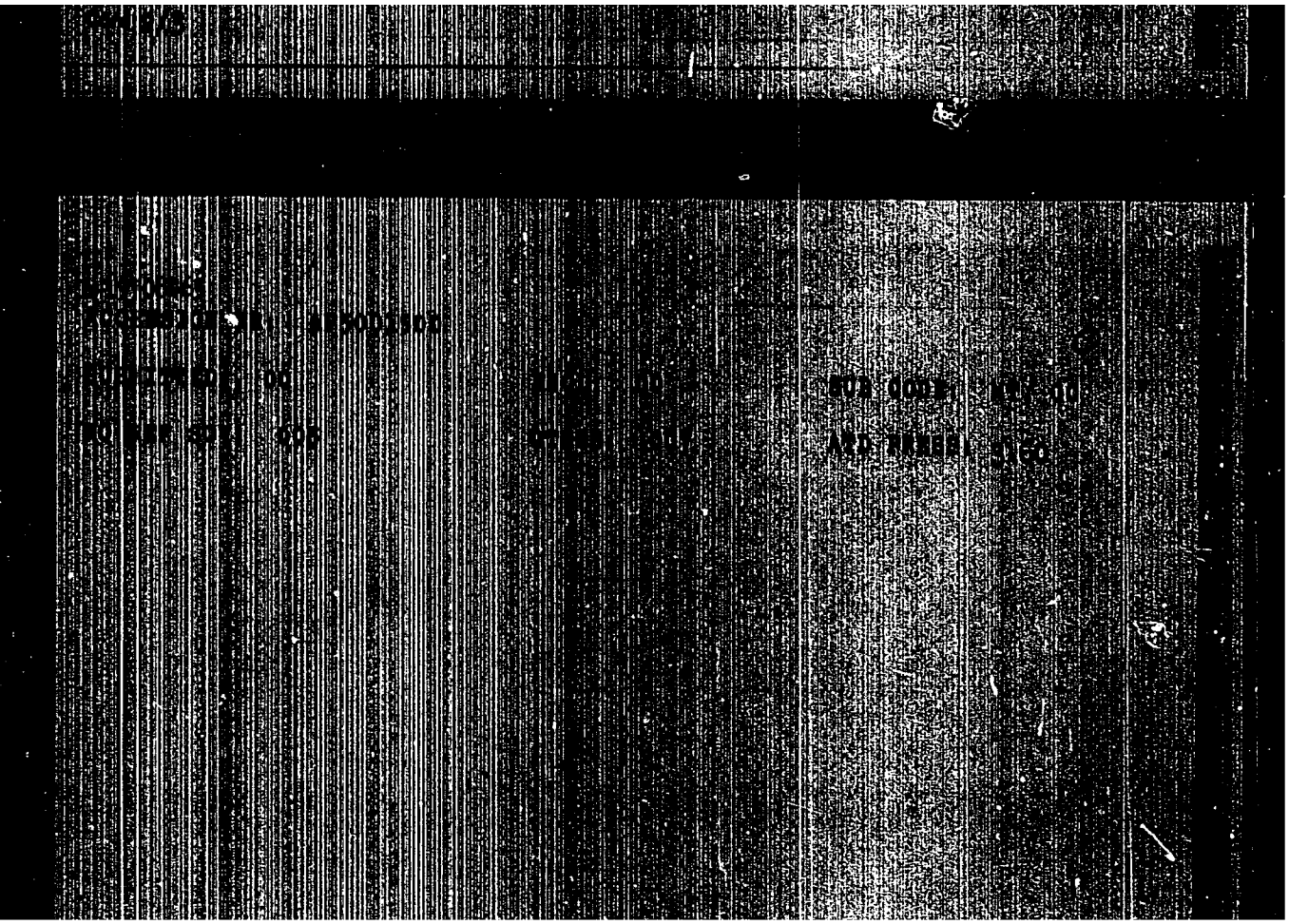
1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber, Synthetic) (Benzoyl peroxide) (Vulcanization)

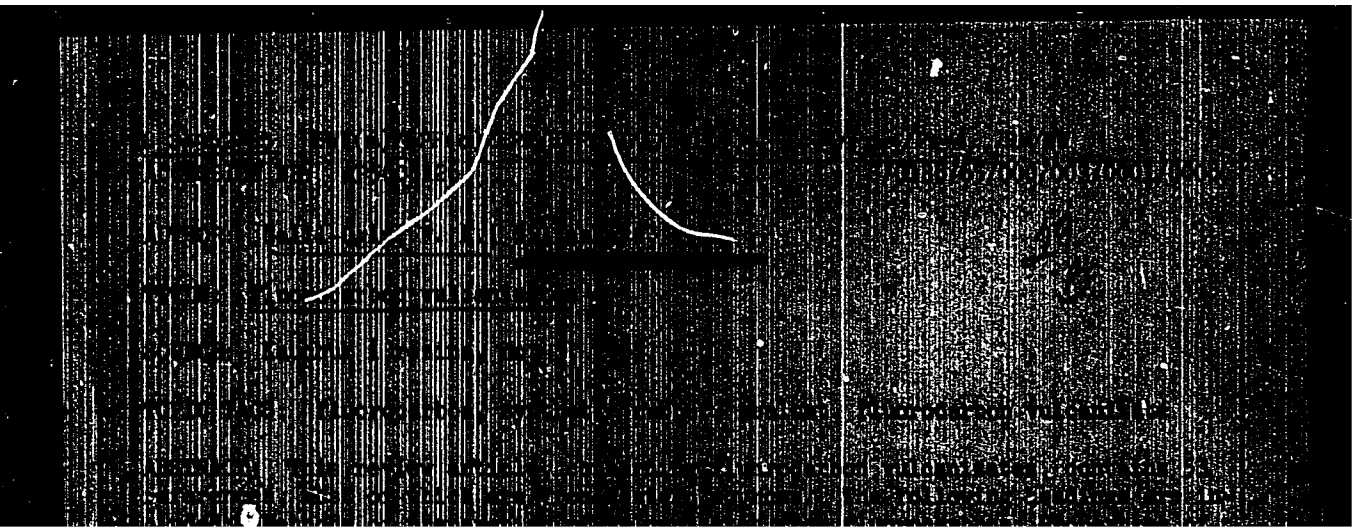
NOVIKOV, A.S.; GALIL-OGLY, F.A.; GILINSKAYA, N.S.; NUDEL'MAN, Z.N.

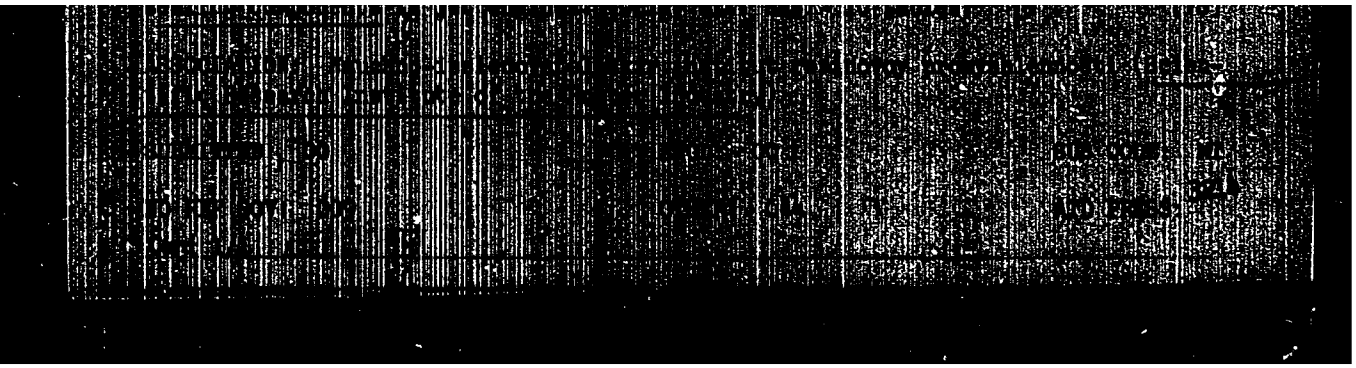
Vulcanization of type "Viton" fluorine copolymers with hexamethylenediamine. Kauch.i rez. 21 no.3:4-10 Mr '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Vulcanization) (Hexadiamine)









L 2553-66 EWT(m)/EPF(c)/EWP(j) RM

ACCESSION NR: AP5024103 UR/0138/65/000/009/0002/0006

678.743.31-134.341:678.028

AUTHOR: Gilinskaya, N. S.; Galil-Ogly, F. A.; Nudel'man, Z. N.; Novikov, A. S.

TITLE: Vulcanization of the SKF-26 fluorocarbon copolymer by Schiff bases

SOURCE: Kauchuk i rezina, no. 9, 1965, 2-6

TOPIC TAGS: fluorocarbon copolymer, vulcanization, Schiff base

ABSTRACT: A study has been made of the vulcanization mechanism of the SKF-26 fluorocarbon copolymer by Schiff bases. Unfilled SKF-26 rubber mixtures with or without MgO were used. N,N'-dibenzylidene-1,6-hexanediamine (I)—the condensation product of benzaldehyde and hexamethylenediamine (II)—was used as the vulcanizing agent. It was shown that the vulcanization kinetics of SKF-26 by Schiff bases differs from that by free diamines. Since initiation of the copolymer cross-linking by I requires the presence of moisture, the following vulcanization mechanism was suggested:

$$C_6H_5CH{=}N(CH_2)_6N{=}CHC_6H_5 + 2H_2O \rightleftharpoons \rightleftharpoons 2C_6H_5CHO + H_2N(CH_2)_6NH_2 \quad (1)$$

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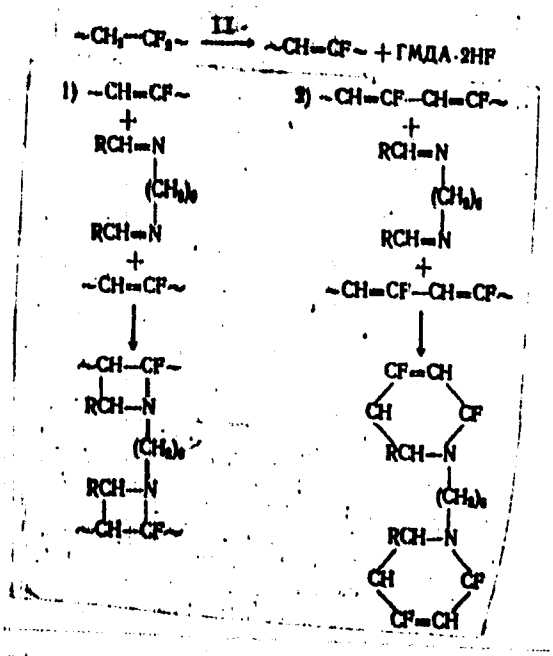
L 2553-66
ACCESSION NR: AP5024103



Card 2/3

L 2553-66

ACCESSION NR: AP5024103

3

In contrast to vulcanizates made with free diamines which contain C = N cross-links, vulcanizates made with Schiff bases contain C-N cross-links which are more stable and improve the properties of vulcanizates. Orig. art. has: 4 figures and 2 tables.

[BO]

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: 00 ENCL: 00 SUB CODE: GC, MT

NO REF SOV: 002 OTHER: 007 ATD PRESS: 4118

Card 3/3

EBIN, L.Ye.; GANELIN, A.M.; GILINSKIY, A.M.; GORNOVESOV, G.V.; ZLATKOVSKIY, A.P.; KAUFMAN, B.M.; KISELEV, N.A.; KULIKOV, P.Ye.; LEVIN, M.S.; SLAVIN, M.P.; SMIRNOV, B.V.; SMIRNOV, V.I.; SMIRNOVA, I.S.; TARASOVA, V.Ye.; CHEBOTAREV, V.I.; SHATS, Ye.L.; ENTIN, I.A.; IOSIPYAN, S.G., redaktor; SARKISYAN, A.M., redaktor; SMIRENSKIY, M.D., redaktor; TEPLITSKIY, Ya.S. redaktor; KOMAROVA, V.M., redaktor; GURNVICH, M.M., tekhnicheskiy redaktor.

[Rules for the operation of electric installations in rural areas] Pravila tekhnicheskoi ekspluatatsii sel'skikh elektroustanovok. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1957. 183 p. (MIRA 10:4)

1. Russia (1923- U.S.S.R.) Glvanoye upravleniye sel'skikh elektrostantsii.
(Electric power plants) (Electricity in agriculture)

GILINSKIY, I. A., Engineer

"Investigation of Loss in an Electric Power System Under Nonoptimum Conditions of a Hydroelectric Station With Seasonal Regulation." Thesis for degree of Cand Technical Sci Sub 29 Jun 50, Moscow Order of Lenin Power Engineering Inst imeni V. M. Molotov

Summary 71, 4 Sep 52, Dissertations Presented for Degrees in Science and Engineering in Moscow in 1950. From Vechernyaya Moskva, Jan-Dec 1950.

GILINSKIY, I.A., kandidat tekhnicheskikh nauk

Study of operating characteristics of reaction hydroturbines in rural hydroelectric power stations. Nauch.trudy VIESKH no.1:155-172 '54. (MLRA 8:11)

(Hydraulic turbines)

LEYVIKOV, Moisey L'vovich; GILINSKIY, I.A., redaktor; SOKOLOVA, N.N., tekhnicheskiy redaktor

[Meteorology, hydrology, and hydrometry] Meteorologiia, gidrologiia i gidrometriia. Izd. 2-e, perer. i dop. Moskva, Gos.izd-vo selkhoz. lit-ry, 1955. 510 p. (MLRA 9:3)
(Meteorology) (Hydrology) (Stream measurements)

GILINSKIY, I.A., kand.tekhn.nauk

Optimum working conditions for isolated rural hydroelectric power stations. Mekh. i elek.sots.sel'khoz. no.5:33-35 '56. (MIRA 12:4)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut elektrifikatsii sel'skogo khozyaystva.
(Hydroelectric power stations)

[redacted], IOSIF [redacted]

LOBANOV, Vasiliy Nikiforovich; SAZONOV, Nikolay Alekseyevich; VOROB'YEV, Vasiliy Fedorovich; BEYLIS, Mikhail Yefimovich; GILINSKIY, Iosif Abramovich; ENTIN, Isaak Arkad'yevich; KOPTEVSKIY, D.Ya., redaktor; RAKOV, S.I., tekhnicheskiy redaktor

[Rural electrician] Elektromekhanik sel'skikh elektroustanovok. Moskva, Vses.uchebno-pedagog.izd-vo Trudrezervizdat, 1957. 454 p. (Electric engineering) (MLRA 10:9)

GILINSKIY, I.A., kand.tekhn.nauk; CHERKASSKIY, A.Kh., kand.tekhn.nauk, retsenzent; MOSKVIN, M.V., inzh., retsenzent; KOZLOV, V.P., inzh., retsenzent; MASHKOV, G.F., inzh., retsenzent; YAKOVLEV, L.M., inzh., red.; NIKITIN, A.G., red.izd-va; EL'KIND, V.D., tekhn.red.

[Heat, hydraulic, and air engines of rural electric power stations] Teplovye, gidravlicheskie i vetrianye dvigateli sel'skikh elektrostantsii. Moskva, Gos.nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1958. 259 p. (MIRA 12:3)
(Air turbines) (Hydraulic turbines) (Electric motors)

GILINSKIY, I.A., kand.tekhn.nauk

Investigating the unsteady flow in tail waters of the Gorbov Hydroelelectric Power Station. [Nauch.trudy] VINSKH 3:349-357 '58. (MIRA 13:4)

(Hydroelectric power stations)

GILINSKIY, I.A.

Utilizing self-closed guide meachanisms in hydraulic turbines of rural hydroelectric power plants to prevent over-acceleration. Shor. nauch.-tekh. inform. po elek. sel'khoz. no.7:47-49 '59.
(MIRA 13:9)

(Hydraulic turbines)

LOBANOV, Vasiliy Nikiforovich; SAZONOV, Nikolay Alekseyevich; BEYLIS, Mikhail Yefimovich; GILINSKIY, Iosif Abramovich; ENTIN, Isaak Arkad'yevich; VOROB'YEV, V.F., nauchnyy red.; SEREBRINNIKOVA, L.A., red.; DEMINA, G.A., red.; ISHKHANOV, V.S., red.; TOKER, A.M., tekhn.red.

[Electrician of rural electrical systems] Elektromekhanik sel'skikh elektroustanovok. Moskva, Vses.uchebno-pedagog.izd-vo Proftekhizdat, 1960. 548 p. (MIRA 14:1)
(Electricians--Handbooks, manuals, etc.)
(Electric power distribution)

84826

S/020/60/134/005/009/023
B019/B060

9,1300 (1116, 1144, 1331)

AUTHOR: Gilinskiy, I. A.

TITLE: The Interaction of Electrons With an H_{01} Wave Field in a Circular Waveguide

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 134, No 5, pp. 1055 - 1057

TEXT: In connection with the generation of millimeter waves it is necessary to know the interaction of the electron flow with a field of undamped waves in a waveguide. The article under consideration investigates the mechanism of energy transfer by electrons, caused by nonlinear effects. The investigation is particularly concerned with the interaction of a spiral electron flow in an H_{01} wave field of a circular waveguide.

The dimensionless Hamiltonian $H = p_y^2/2 + p_x^2/2 + x^2/8 - 2\beta^2/x^2 - \beta$ $+ \varepsilon_1(x)\sin(\frac{h}{g}y - \frac{\omega_1}{\Omega} + \alpha) + \ldots$ (2) is set up, where $\varepsilon = Bg^2/H_0$. The largest energy transfer is found to take place with a strong non-coaxial

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The Interaction of Electrons With an H_{01} Wave Field in a Circular Waveguide

S/020/60/134/005/009/023
B019/B060

beam. A complicated formula (12) is obtained for the mean energy transfer. The author concludes from the discussion of this formula that the energy loss is basically dependent on magnitude and sign of the initial mistuning. The author thanks P. A. Borodovskiy for his interest, Yu. B. Rumer and V. L. Pokrovskiy for their discussions. A. V. Gaponov is mentioned. There are 5 Soviet references.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Physics of the Siberian Branch of the Academy of Sciences USSR)

PRESENTED: May 28, 1960, by M. A. Leontovich, Academician

SUBMITTED: May 25, 1960

26116
S/056/61/041/001/0[illegible]
B102/B214

24.6714

AUTHORS: Kazantsev, A. P., Gilinskiy, I. A.

TITLE: The interactions of transverse oscillations in a plasma

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 41, no. 1(7), 1961, 154-158

TEXT: The role of a nonlinear effect connected with the influence of the magnetic field of transverse waves in a plasma is discussed. It is shown that, if the frequency difference of two transverse waves equals the plasma frequency (resonance interaction), the waves are modulated. In the case of a non-resonance interaction only a weak frequency shift is observed. As is usual, in the treatment of weak plasma oscillations the effect of the proper magnetic field is neglected, since it is only of the order of nv/c (n-refractive index, v.- characteristic velocity). As has been shown by V. L. Ginzburg and A. V. Gurevich (UFN, 60, 2, 3, 1960), this effect leads to an additional interactior between the waves. Naturally, this effect is most important in a magneto-active plasma if n is large. Only the propagation of waves along a homogeneous magnetic field H(0,0,H)

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The interactions of transverse ...

is considered here; the various transverse waves interact by means of excitation and absorption of longitudinal oscillations. Start is made from the system of equations describing the electromagnetic field and the plasma in hydrodynamical approximation:

$$du/dt + eE/m = -(e/2mc)(v\partial A^*/\partial z + v^*\partial A/\partial z), \quad (1)$$

$$\partial E/\partial z + 4\pi e n_0 \rho = 0, \qquad d\rho/dt + (1+\rho)\,\partial u/\partial z = 0, \quad (2)$$

$$\frac{d}{dt}\left(v - \frac{e}{c}A\right) = i\frac{eH}{mc}v, \quad (3)$$

$$\frac{1}{c^2}\frac{\partial^2 A}{\partial t^2} - \frac{\partial^2 A}{\partial z^2} = -\frac{4\pi}{c}en_0(1+\rho)v. \quad (4)$$

Here, $d/dt = \partial/\partial t + u\,\partial/\partial z$, u and E are electron velocity and electric field in the z-direction, and $\rho = (n-n_0)/n_0$ is the relative change of the electron density. The ions are supposed to be at rest and their density to be equal to n_0. The transverse electric field is described by the vector potential $\vec{A}(A_x, A_y, 0)$; $A = A_x + iA_y$; and $v = v_x + iv_y$, where v_x and v_y are the transverse velocities of the electrons. The electron temperature is

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assumed to be zero, and the dissipative processes are neglected. The longitudinal eigen oscillations are assumed hot to exist. The right-hand side of (1) is assumed to be small, and the terms quadratic in u and ρ are neglected. Then, one can write (1)-(4) in the dimensionless form

$$\frac{\partial^2\rho}{\partial t^2} + \rho = \varepsilon^2 \frac{\partial}{\partial z}\left(v \frac{\partial A^*}{\partial z} + v^* \frac{\partial A}{\partial z}\right), \qquad (5)$$

$$\frac{\partial \rho}{\partial t} + \frac{\partial u}{\partial z} = 0, \quad \frac{d}{dt}(v - A) = i\omega_H v, \qquad (6)$$

$$\partial^2 A/\partial t^2 - \partial^2 A/\partial z^2 + (1 + \rho)\, v = 0. \qquad (7)$$

$v_0 = eA_0/mc$, $\varepsilon = |v_0|/c\sqrt{2}$ is a small parameter, and $\omega_H = eH/mc\omega_0$ is the dimensionless Larmor frequency. An approximate solution of these equations is sought in the form of a superposition of plane waves with slowly varying amplitude: $A(z, t) = \sum_{\omega} A_\omega(t)\, e^{i\varphi_\omega}$, $v(z, t) = \sum_{\omega} \frac{\omega}{\omega - \omega_H}(A_\omega + B_\omega)\, e^{i\varphi_\omega}$,

$$\rho(z, t) = \sum_{\omega > \omega'} a'_{\omega\omega'}(t)\, e^{i(\varphi_\omega - \varphi_{\omega'})} + \text{к. с.}, \qquad (8)$$

Card 3/6 $\varphi_\omega = \omega t + k_\omega z$, $k_\omega = \omega n_\omega$ и $n_\omega^2 = 1 - 1/\omega(\omega - \omega_H)$

The interactions of transverse ...

On introducing this in (5)-(7) one obtains the amplitude equations:

$$2i(\omega-\omega')\dot{\alpha}_{\omega\omega'}+[1-(\omega-\omega')^2]\alpha_{\omega\omega'}=-\varepsilon^2\lambda_{\omega\omega'}A_\omega A^*_{\omega'}, \quad (9)$$

$$\mu(\omega)\dot{A}_\omega = i\sum_{\omega'}\alpha_{\omega\omega'}\frac{\lambda_{\omega\omega'}}{(k_\omega-k_{\omega'})^2}A_{\omega'}, \quad (10)$$

$$B_\omega = i\frac{\omega_H}{\omega}\left(\frac{\lambda_\omega}{\omega-\omega_H}+\sum_{\omega'}\frac{k_{\omega'}(\omega-\omega')\alpha_{\omega\omega'}A_{\omega'}}{(k_\omega-k_{\omega'})(\omega'-\omega_H)}\right), \quad (11)$$

$$\lambda_{\omega\omega'}=(k_\omega-k_{\omega'})\left(\frac{k_\omega\omega'}{\omega'-\omega_H}-\frac{k_{\omega'}\omega}{\omega-\omega_H}\right), \qquad \mu(\omega)=2\omega+\frac{\omega_H}{(\omega-\omega_H)^2}.$$

The equations (9) and (10) have the integrals

$$\mu(\omega)|A_\omega|^2+\frac{2}{\varepsilon^2}\sum_{\omega'}\frac{\omega-\omega'}{(k_\omega-k_{\omega'})^2}|\alpha_{\omega\omega'}|^2=\text{const.} \quad (12)$$

For resonance and near resonance terms occurring here the condition $(\omega-\omega')^2=1$ must be satisfied. The resonance terms may be of the same order of magnitude as ε, but the non-resonance terms are not larger than ε^2.

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It is seen from (12) that the interaction between different waves decreases the energy of high frequency oscillations, and increases that of the low frequency ones. If a summation is made in (12) over ω it is found that $\sum \mu(\omega) |A_\omega|^2 = \text{const}$. The integrals (12) and (14) are adiabatic invariants for the present problem. Since further treatment of Eqs. (9) and (10) is difficult in the general case, the special cases of non-resonance interaction and of resonance interaction of two waves are considered. In the former case the solution is easily found to be

$$A_\omega(t) = A_\omega(0)\, e^{i\Delta\omega t},$$

$$\Delta\omega = -\frac{e^2}{\mu(\omega)} \sum_{\omega'}' \frac{\lambda^2_{\omega\omega'} |A_{\omega'}(0)|^2}{(k_\omega - k_{\omega'})^2 [1-(\omega-\omega')^2]}. \qquad (16)$$

In the latter case (the resonance interaction of two extraordinary waves is considered) there is a modulation. The modulation period gives

$$\tau_0 = \int_0^1 \frac{d\zeta}{\sqrt{\zeta(1-\zeta)(I_{20}+I_{10}\zeta)}}. \qquad (20)$$

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The interactions of transverse ...

with

$$d^2\zeta/d\tau^2 + \zeta(I_{20} - I_{10}) + \frac{3}{2} I_{10}\zeta^2 = \frac{1}{2} I_{20}, \quad (18),$$

and approximately $\tau_0 = I_{10}^{-1/2} \ln(4I_{10}/I_{20})$; $I_{1,2} = \mu_{1,2}(\omega) |A_{1,2}|^2$,

$I_{10} = I_1 + I_{10}\zeta$; $I_{20} = I_2 - I_{10}\zeta$. The results do not change qualitatively for non-zero electron temperatures. In place of resonance condition $(\omega - \omega')^2 = 1$ there appears $(\omega_1 - \omega_2)^2 - (c_s/c)^2(k_1 - k_2)^2 = 1$, where c_s is the thermal velocity of the electrons. The authors thank V. L. Pokrovskiy for discussions. There are 3 references: 2 Soviet-bloc and 1 non-Soviet-bloc.

ASSOCIATION: Institut radiofiziki i elektroniki Sibirskogo otdeleniya Akademii nauk SSSR (Institute of Radiophysics and Electronics of the Siberian Department of the Academy of Sciences, USSR)

SUBMITTED: December 30, 1960

Card 6/6

S/589/61/000/053/006/008
B139/B104

24,7800

AUTHORS: Gilinskiy, I. A., Kugayevskiy, A. F.

TITLE: Measurement of parameters of magnetic dielectrics in the decimeter wave-range

SOURCE: Vsesoyuznyy komitet standartov, mer i izmeritel'nykh priborov. Trudy institutov Komiteta no. 53 (113). 1961. 86-93. Issledovaniya v oblasti radiotekhnicheskikh izmereniy.

TEXT: The measurement of parameters of magnetic dielectrics with the aid of coaxial resonators using the open-circuit and short-circuit method is studied. To determine the magnitudes of ε' and μ', the resonance length of the resonator must be measured at three different positions of the test piece: a) at the distance $\lambda/4$ from the piston (λ is the wavelength in the empty resonator), b) close to the piston, c) without test piece.

The results obtained are $\mu = \mu' = \frac{z_d \cdot \beta_d}{z_0 \cdot \beta_0}$ and $\varepsilon = \varepsilon' = \frac{z_0 \cdot \beta_d}{z_d \cdot \beta_0}$.

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Z_0 and β are the wave impedance and the phase constant in the air-filled portion of the resonator, z_d and β_d are the wave impedance and the phase constant of the test piece. The stored energy density is

$W = \frac{1}{4}\left[C\,U^2 + L\,J^2\right]$. L and C are the inductance and the capacitance per unit of length. By integrating over the resonator length, the following is obtained for the position of the test piece

a) $$W_n = A_1^2 \cdot C_1 \left[l - d + \frac{\sin^2\beta(l-d)}{\cos^2\beta_d d}\,d + \frac{1}{4}\right]$$

and for the position of the test piece

b) $$W'_n = A'^2_1 \cdot C_1 \left[L_2 - d + \frac{\sin^2\beta(L_2-d)}{\sin^2\beta_d d}\,d\right]$$

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C_1 is the capacitance per unit of length of the sections designated in the drawing by I and III. For the losses the authors develop the formulae

$$\frac{1}{Q_1}-\frac{1}{Q_c}=\frac{\varepsilon\cdot\frac{\cos^2\beta\,(\Delta l_1+d)}{\cos^2\beta_A d}\left[\left(d+\frac{\sin 2\beta_A d}{2\beta_A}\right)\cdot\operatorname{tg}\delta_\varepsilon+\left(d-\frac{\sin 2\beta_A d}{2\beta_A}\right)\cdot\operatorname{tg}\delta_\mu\right]}{\frac{\lambda}{4}-d+\Delta l_1+\frac{\cos^2\beta\,(\Delta l_1+d)}{\cos^2\beta_A d}\left(\varepsilon d+\frac{\lambda}{4}\right)} \qquad (29)$$

and

$$\frac{1}{Q_1'}-\frac{1}{Q_0'}=\frac{\varepsilon\cdot\frac{\sin^2\beta\,(\Delta l_2+d)}{\sin^2\beta_A d}\left[\left(d+\frac{\sin 2\beta_A d}{2\beta_A}\right)\cdot\operatorname{tg}\delta_\mu+\left(d-\frac{\sin 2\beta_A d}{2\beta_A}\right)\cdot\operatorname{tg}\delta_\varepsilon\right]}{\frac{\lambda}{2}-d+\Delta l_2+\frac{\sin^2\beta\,(\Delta l_2+d)}{\sin^2\beta_A d}\varepsilon\cdot d}, \qquad (30)$$

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... is the Q-factor of the resonator for the test piece-position (a), ... with respect to the disturbance of the resonance curve; Q_1' is the Q-factor of the resonator for the test piece-position (b) (Fig.). V. I. ... nov, "Radiotekhnika i elektronika" v. 1, no. 9, 1956, K voprosu ob ... kh kompleksnykh dielektricheskikh i magnitnykh pronitsayemostey v ... dielektrikakh na santimetrovykh volnakh (Measurement of complex dielectric and magnetic permeability in magnetic dielectrics on centimeter ... ves) is mentioned. There is 1 figure.

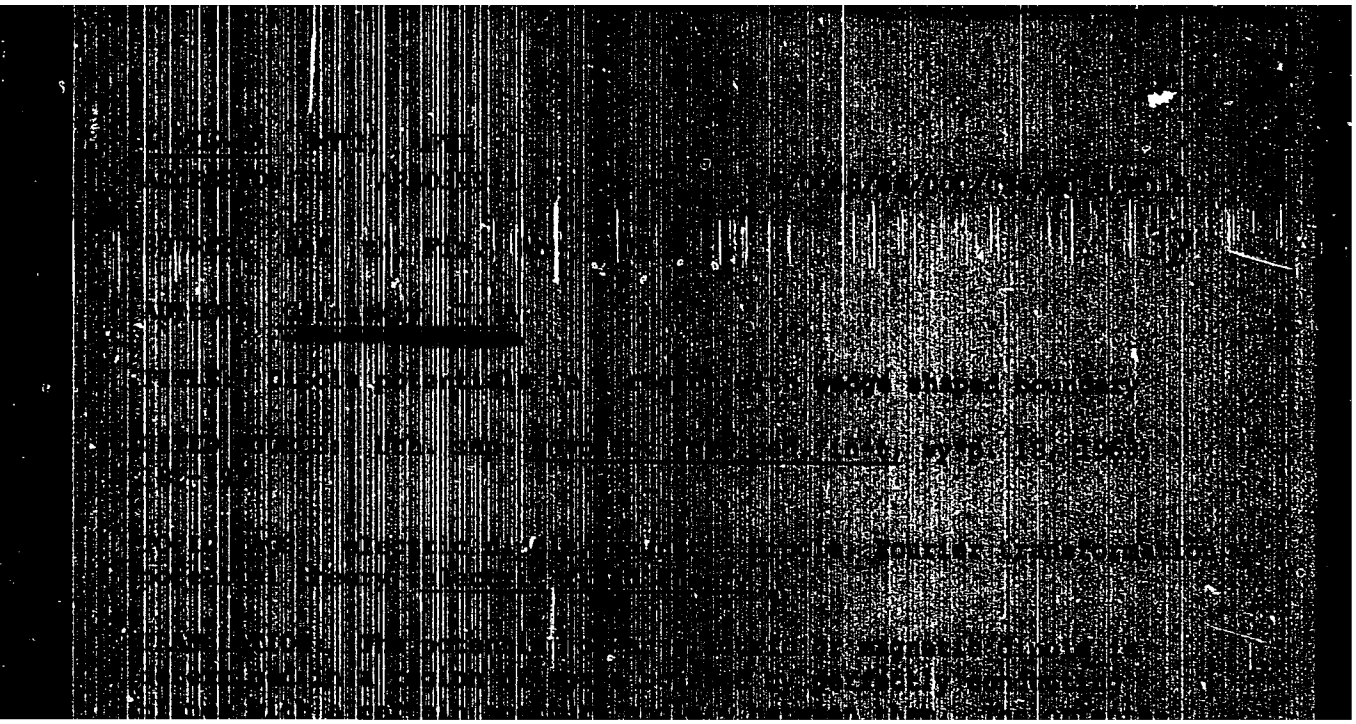
ASSOCIATION: MGIMO

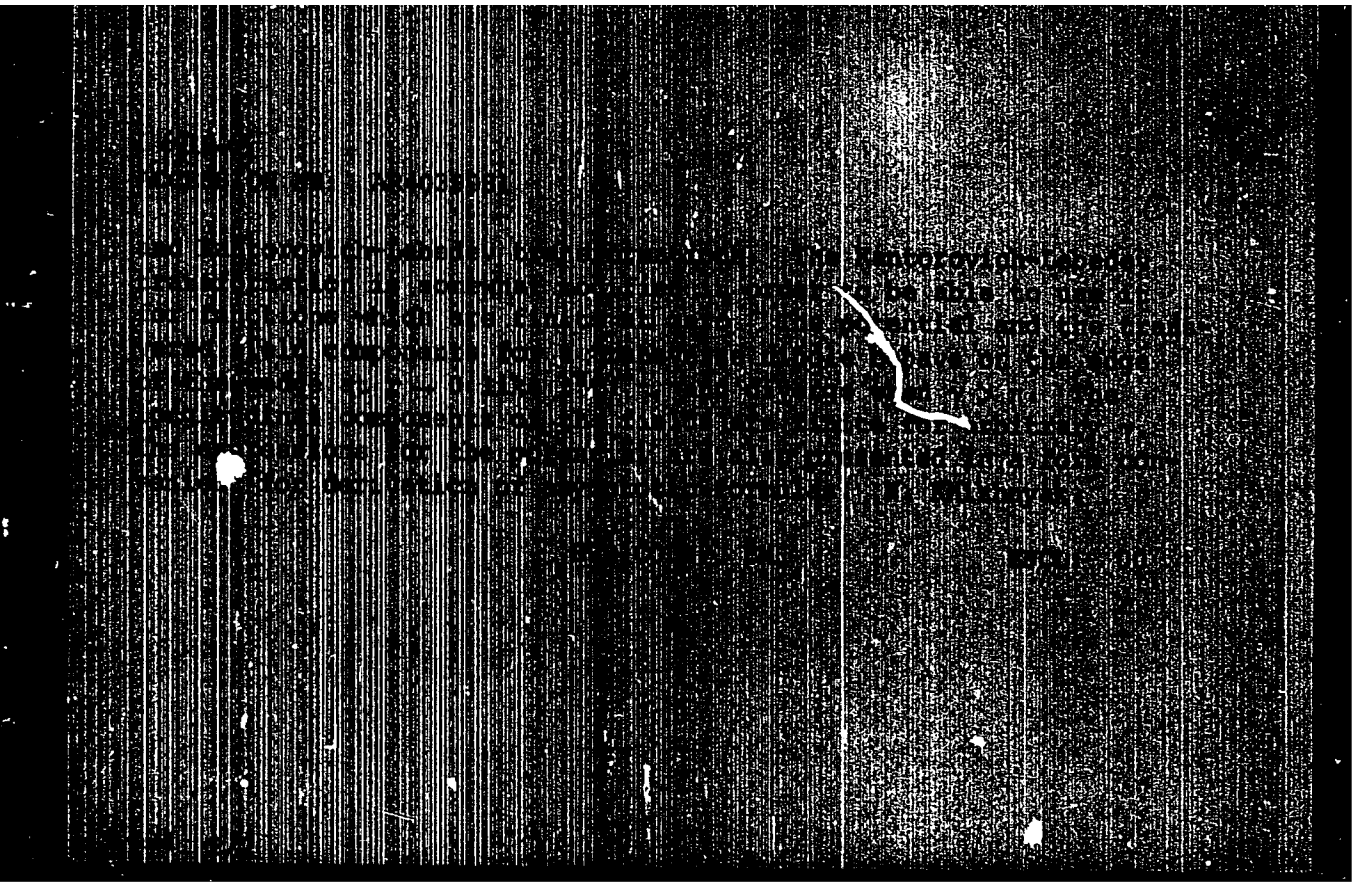
SUBMITTED: January 8, 1960

Card 4/5

LOGOV, Igor' Leonidovich; GILINSKIY, I.A., kand. tekhn. nauk, retsenzent; PAL'KO, O.S., inzh., red.; SMIRNOVA, G.V., tekhn. red.; VLADIMIROVA, L.A., tekhn. red.

[Pneumatic pumps]Pnevmaticheskie nasosy. Moskva, Mashgiz, 1962. 207 p. (MIRA 15:9)
(Pumping machinery)





ACCESSION NR: AR4032167 S/0058/64/000/002/B008/B008

SOURCE: Ref. zh. Fiz., Abs. 2B84

AUTHOR: Gilinskiy, I. A.

TITLE: Radiation of a charge moving uniformly past a wedge-shaped boundary

CITED SOURCE: Uch. zap. Novosib. gos. ped. in-t, vy*p. 18, 1963, 198-208

TOPIC TAGS: moving charge radiation, transition radiation, wedge shaped boundary, nonrelativistic radiating particle, ultrarelativistic radiating particle

TRANSLATION: When a charge moves uniformly past a non-planar boundary between two media, radiation is produced. The potentials of a particle moving uniformly in a medium with a wedge-shaped metallic

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ACCESSION NR: AR4032167

boundary are determined. The resultant radiation is investigated. In the nonrelativistic case it is directed along the edge and is proportional to $(\beta)^{2\pi/\gamma+1}$ (γ -- exterior angle of wedge). The radiation of an ultrarelativistic particle is proportional to its energy and its angular distribution has two maxima.

DATE ACQ: 31Mar64 SUB CODE: ?H ENCL: 00

Card 2/2

L 12626-63 EDS/EWT(1) AFFTC/ASD

ACCESSION NR: AP3001395 S/0020/63/150/004/0767/0770

56
50

AUTHOR: Gilinskiy, I. A.

TITLE: Radiation by a particle passing through a wedge-shaped metallic screen

SOURCE: AN SSSR. Doklady, v. 150, no. 4, 1963, 767-770

TOPIC TAGS: Radiation by moving charge, electromagnetic radiation

ABSTRACT: It was shown by V. G. Ginsburg and I. M. Frank (Zhurn. eksperim. i teorit. fiz., vol. 16, page 15, 1946) that when a uniformly-moving charge traverses a plane boundary between two media, a transient radiation appears; a passage near a boundary which is not plane also causes a radiation due to induced polarization or electric current in the dielectric or metal, respectively. In the present work the case of a wedge-shaped metallic screen is studied. The wedge is assumed to be perfectly conducting. The field of the moving charge is considered as given by superposition of fields of dipoles located along the path of the charge. The results of computation show that mostly long wavelengths are radiated. The intensity of radiation as a function of the space angle is given. When the velocity of the charged particle is close to that

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ACCESSION NR: AP3001395

6

of light, two maxima in the angular distribution appear. The total energy of radiation is proportional to the energy of the particle. "The author expresses his gratitude to A. M. Dykhne, V. L. Pokrovskiy, Yu. B. Rumer, A. P. Kazantsev, and G. F. Surdutovskiy for their discussions in this work." Orig. art. has: 9 equations and 2 figures.

ASSOCIATION: Novosibirskiy gosudarstvennyy pedagogicheskiy institut (Novosibirsk State Pedagogic Institute)

SUBMITTED: 01Jan63 DATE ACQ: 01Jul63 ENCL: 00

SUB CODE: 00 NO REF SOV: 005 OTHER: 00

Card 2/2

GILENSKIY, I.A.

Dipole potentials in regions with a wedge-shaped boundary. Uch. zap. Novosib. gos. ped. inst. no.18:185-197 '63.

Radiation of a charge in uniform motion past a wedge-shaped boundary. Ibid.:198-208

(MIRA 17:10)

LOBANOV, Vasiliy Nikiforovich; SAZONOV, Nikolay Alekseyevich [deceased]; BEYLIS, Mikhail Yefimovich; GILINSKIY, Iosif Abramovich; SOLODENIKOVA, G.A., nauchn. red.; SHALYT, M.A., red.

[Electrician of rural electrical systems] Elektromekhanik sel'skikh elektroustanovok. [By] V.N.Lobanov i dr. Izd.4., ispr. i dop. Moskva, Vysshaia shkola, 1964. 418 p. (MIRA 17:5)

GILINSKIY, I.A.; RYAZANTSEV, K.A.

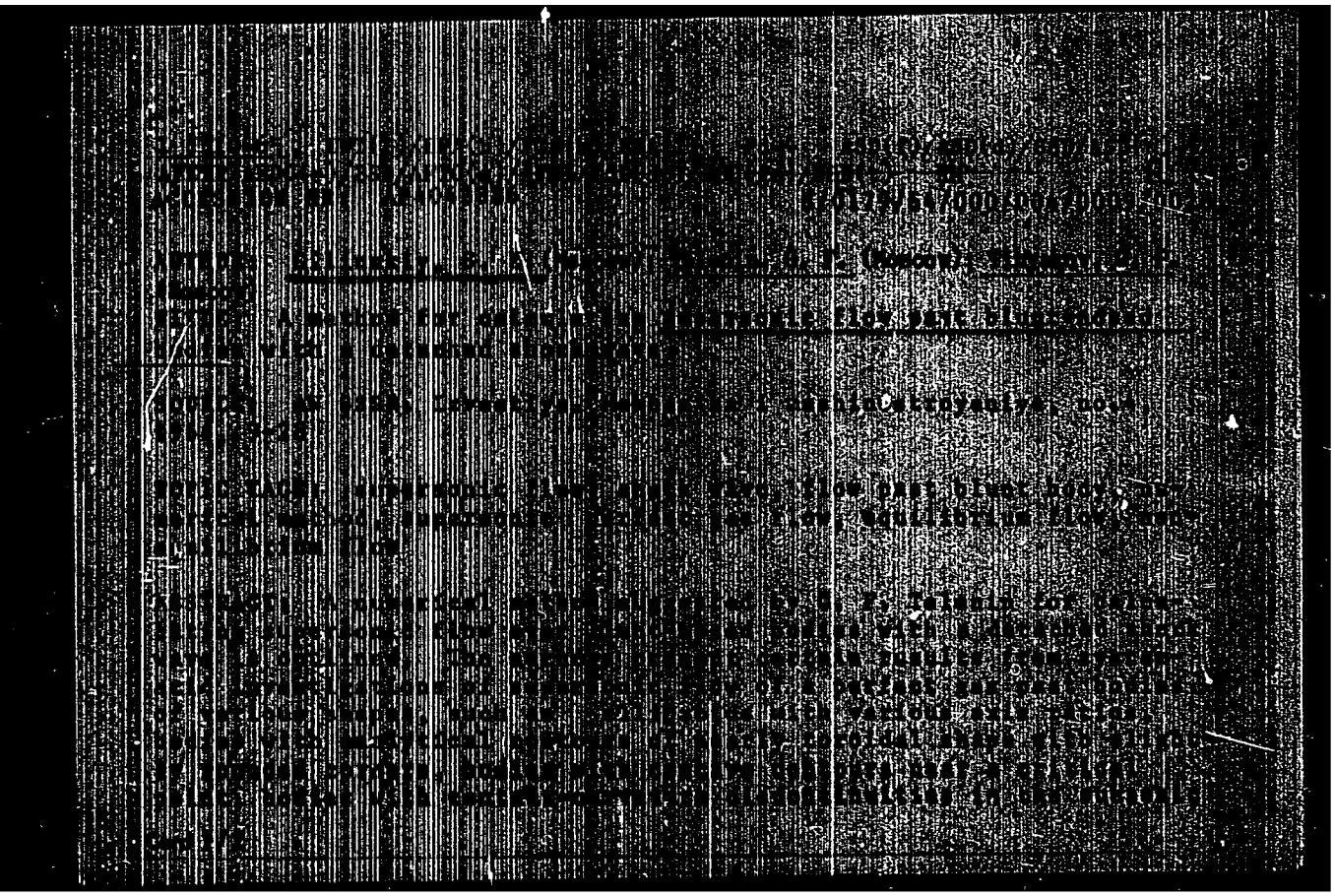
Absorption (radiation) of electromagnetic waves by a charged particle in a constant magnetic field. Izv. vys. ucheb. zav.; radiofiz. 7 no.5: 838-843 '64. (MIRA 18:2)

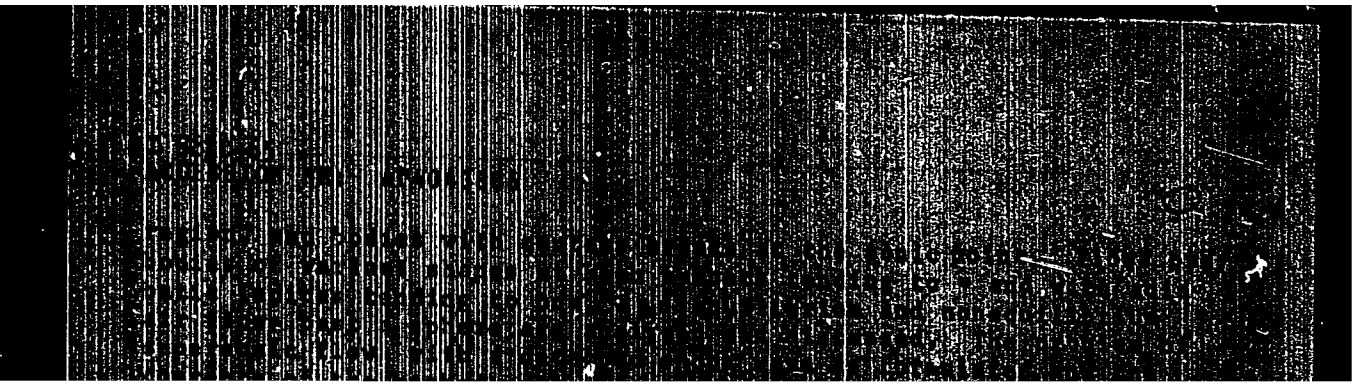
1. Novosibirskiy gosudarstvennyy pedagogicheskiy institut.

GILINSKY, S.M.; TELENIN, G.F. (Moscow)

"Supersonic flow past bodies of various form with a detached shock wave".

report presented at the 2nd All-Union Congress on Theoretical and Applied Mechanics, Moscow, 29 Jan - 5 Feb 64.





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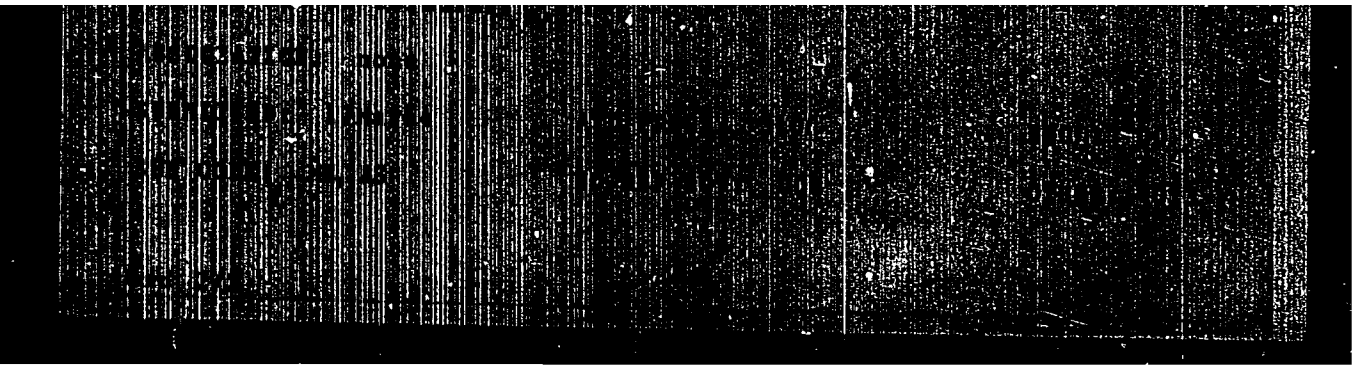

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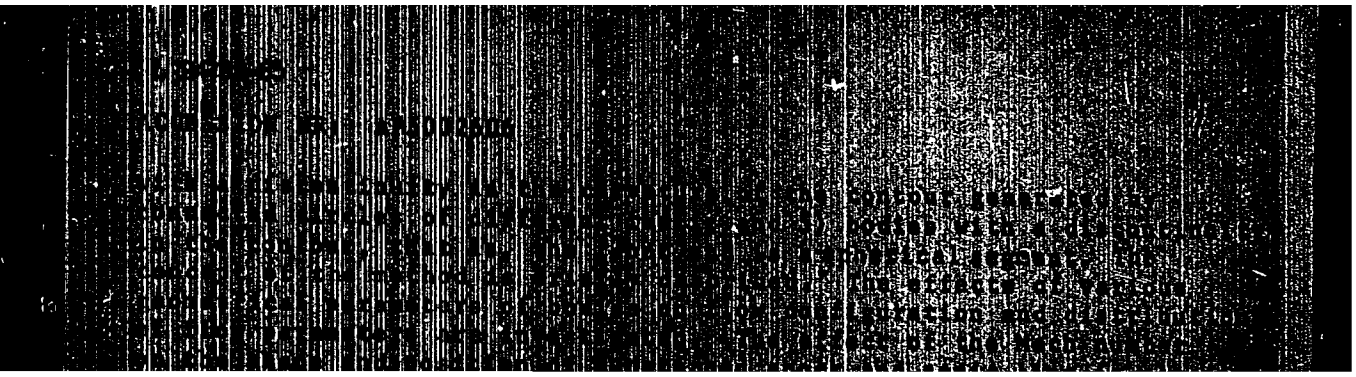

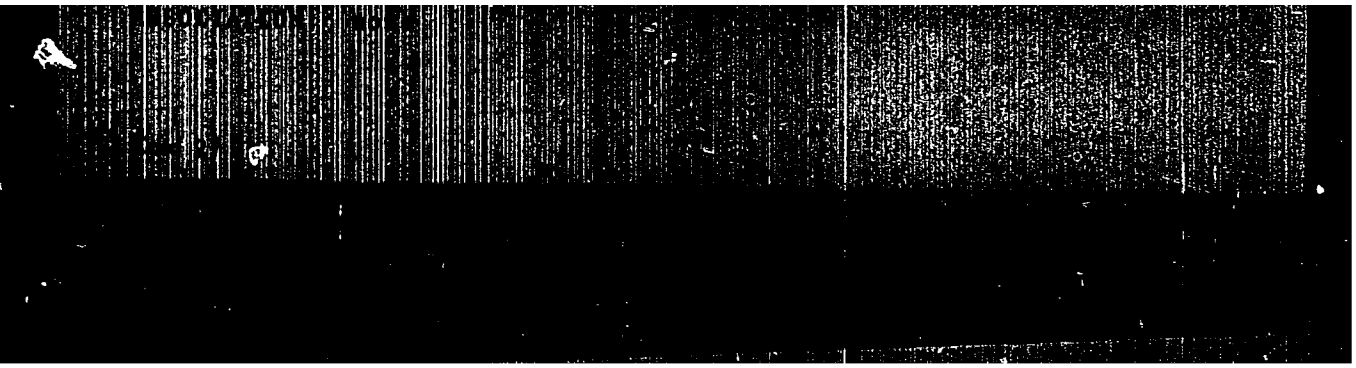

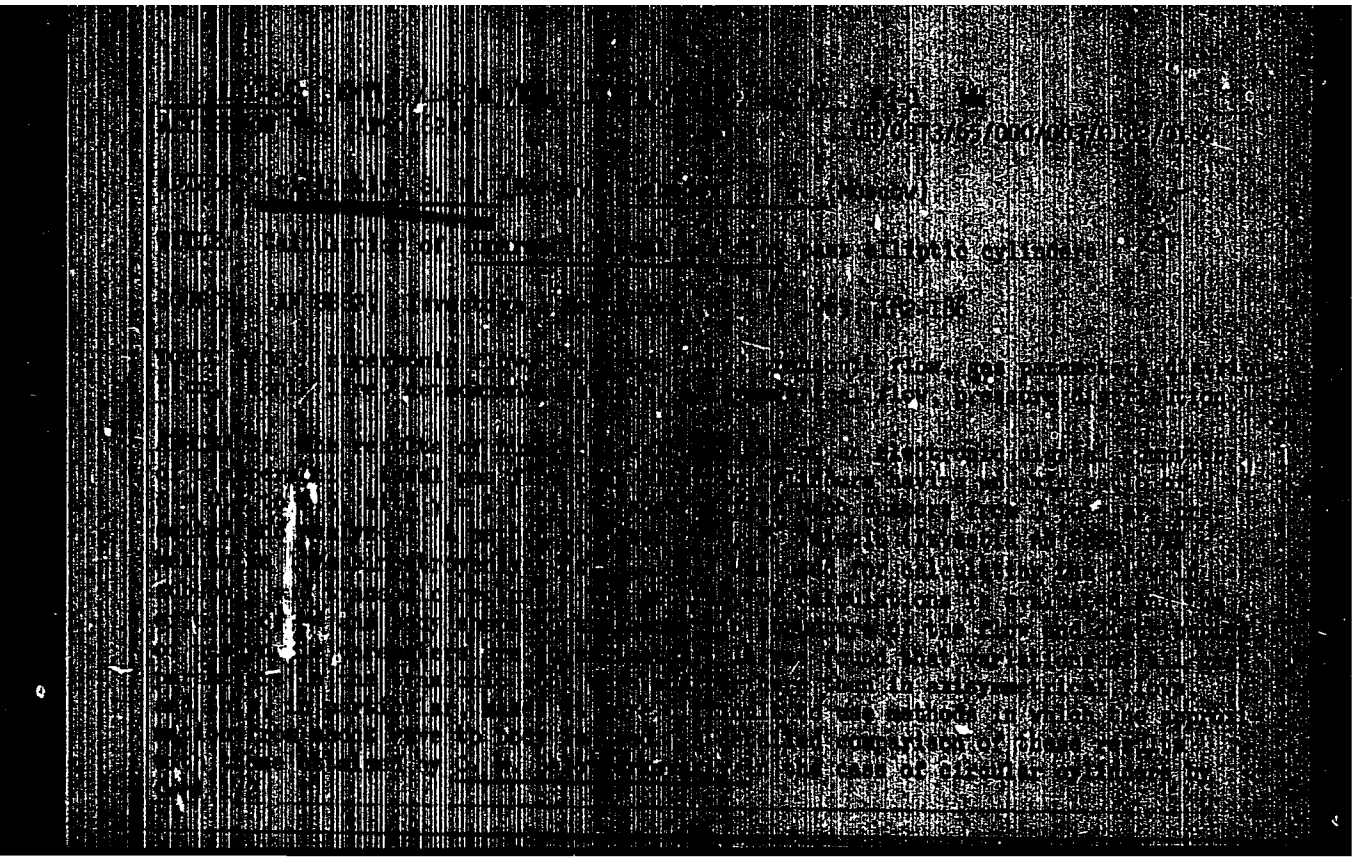

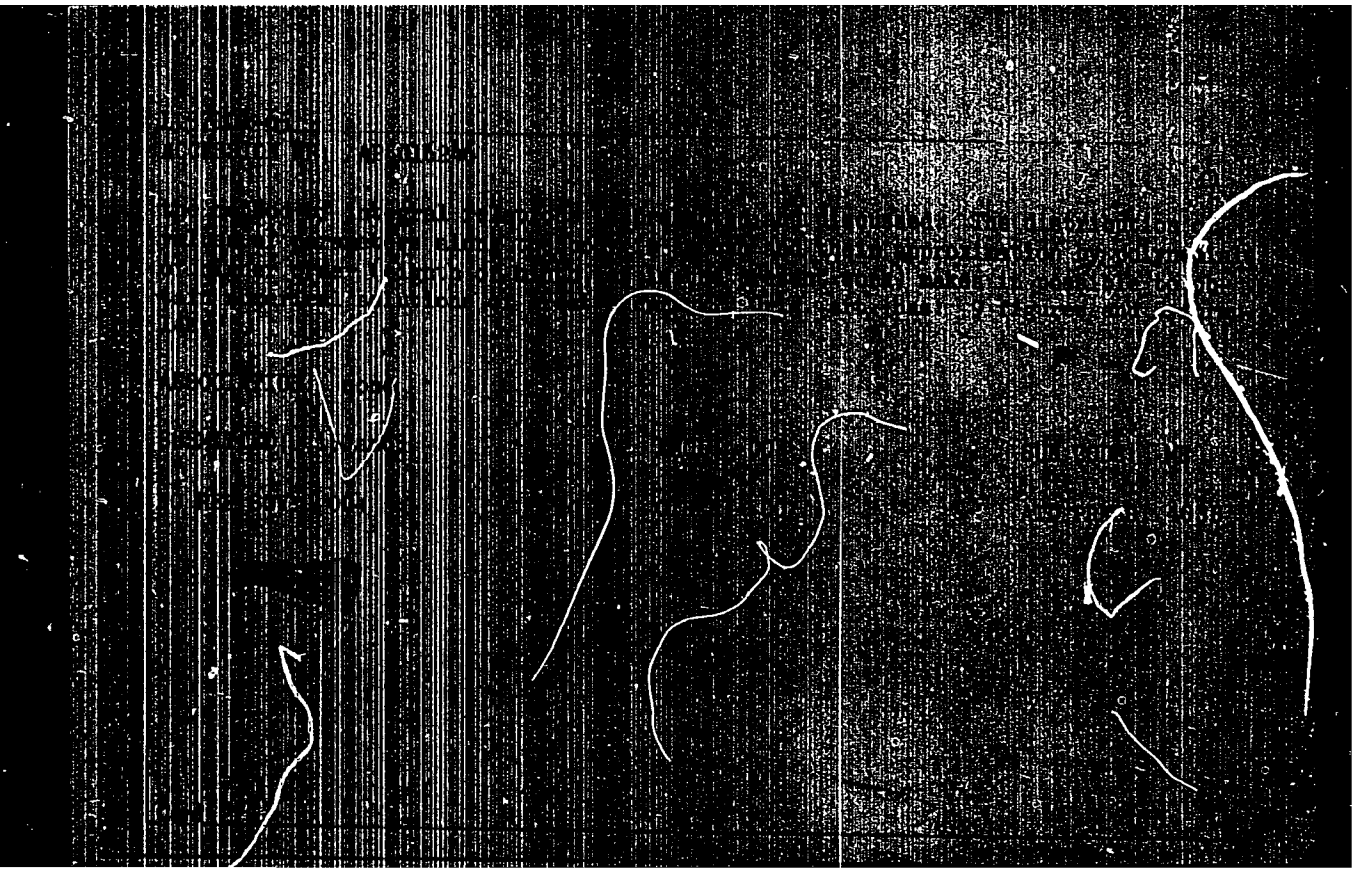

L 20637-66 EWT(1)/EWP(m)/EWT(m)/EWA(d)/T/EWA(1) WW/JW/WE

ACC NR: AP6010836 SOURCE CODE: UR/0421/66/000/001/0016/0021

AUTHOR: Gilinskiy, B. M.(Moscow); Makarova, N. Ye.

67
66
13

ORG: none

TITLE: Calculating supersonic air flows past blunted bodies with physicochemical transformations taken into account

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 16-21

TOPIC TAGS: supersonic aerodynamics, supersonic flow, detached shock wave, equilibrium flow, inviscid flow, shock wave, dissociation

ABSTRACT: Supersonic air flows past blunted axisymmetrical bodies with a detached shock wave are investigated under the assumption of equilibrium physicochemical transformations. Air flows past ellipsoids of revolution with eccentricities $\delta = b/a = 1, 2, 3$ and a body with a forward end described by the equation $|x|^n + |y|^n = 1$ with $n = 10$ were calculated on a computer by means of the Gilinskiy-Telenin-Tin'yakov method over a wide range of flow parameters: M_∞, from 4 to 50; pressure p_∞, from 10^{-4} atm to 1 atm; and temperature T_∞, from 200° to 300°K. The results presented in the tables and graphs for air and a perfect gas show that dissociation has little effect on pressure (about 5 to

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10%) and that the pressure distribution depends slightly on the parameters of free flow (see Fig. 1). Fig. 2 shows the effect of body shape

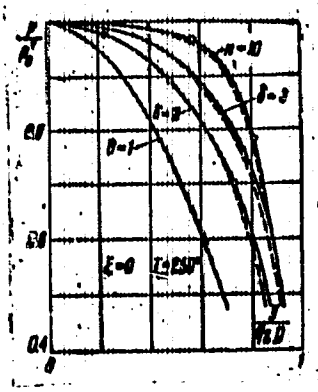

Fig. 1. Pressure distribution versus y

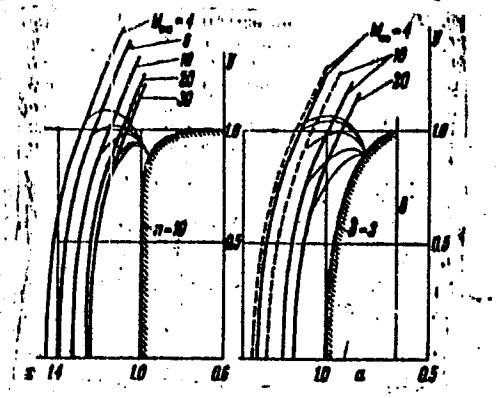

Fig. 2. Flow configurations

and M_∞ on flow configuration with $p_\infty = 0.01$ and $T_\infty = 250°K$, and that dissociation leads to higher compression in the shock layer. The nonmontonic dependence of stand-off distances of shock waves on M_∞ is

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explained by the nonmonotocity of the degree of compression ρ_∞/ρ_c in a straight shock due to M_∞, and in the case of hypersonic flows, the stand-off distance is uniquely connected with the compression coefficient. The investigation also shows that the similarity of flows, established in the case of flows of a perfect gas past bodies of various shapes, is preserved in the presence of dissociation. The authors thank G. F. Telenin for his attention and help. Orig. art. has: 5 figures, 8 formulas, and 3 tables. [AB]

SUB CODE: 20/ SUBM DATE: 15Jan65/ ORIG REF: 004/ ATD PRESS: 4225

Card 3/3 BK

ACC NR: AP6034532 SOURCE CODE: UR/0421/66/000/005/0008/0013

AUTHOR: Gilinskiy, S. M. (Moscow); Zapryanov, Z. D. (Moscow); Chernyy, G. G. (Moscow)

ORG: Mechanics Institute MGU (Institut mekhaniki MGU)

TITLE: Supersonic flow of a combustible gas mixture around a sphere

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 5, 1966, 8-13

TOPIC TAGS: supersonic combustion, combustion, air breathing engine

ABSTRACT: The steady-state supersonic flow of a combustible gas mixture around solid bodies which generates detonation or deflagration fronts is of great interest in connection with combustion in supersonic air streams. Chernyy and Kvashina (Ustanovivsheyesya obtekaniye konusa potokom detoniruyushchego gaza. PMM, 1959, t. 23, vyp. 1) had analyzed supersonic flow past a cone or wedge with attached adiabatic compression shocks followed by deflagration fronts. Two solutions were found - one with combustion in the detonation wave and the other with a slow combustion front preceded by an adiabatic compression shock. Samozvantsev (O stabilizatsii detonatsionnykh voln pri pomoshchi plokhoobtekaemykh tel. PMTF, 1964, No. 4) later presented an analysis which permits predictions of these phenomena. In the present study, the flow with combustion in the detonation wave around a sphere or a semisphere attached to a cylinder was analyzed for cases where the detonation wave does not disintegrate, or disintegrates in the region with subsonic or supersonic velocity.

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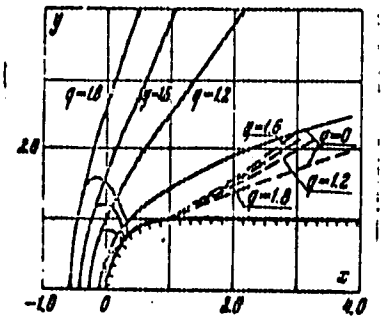

Fig. 1. Flow pattern around a sphere or semisphere attached to a cylinder

In the latter case, the analysis did not present any difficulties. In the former case, which resembles the problem of a supersonic jet of finite width impinging on an obstacle, mathematical difficulties were experienced. The analysis was based on the assumption that an axisymmetric body placed in a supersonic stream generates a shock wave which ignites the mixture. The heat release at all points of the detonation wave is equal. First the subsonic and transonic and then the supersonic regions were calculated by methods developed for adiabatic flows. The following equation was obtained for the velocity component normal to the detonation wave:

$$V_n = \frac{\Lambda_1}{\sin\beta}\left\{\frac{\gamma_1\sin^2\beta}{\gamma_1+1}+\frac{1}{\gamma_1+1}\left(\frac{\gamma_1}{\gamma_1 M_1^2}-\left[\left(\sin^2\beta-\frac{\gamma_1}{\gamma_1 M_1^2}\right)^2-B\sin^2\beta\right]^{1/2}\right)\right\}$$

$$B = 2(\gamma_1^2-1)\left[\frac{q}{\Sigma\Lambda_1^2}-\left(\frac{\gamma_1}{\gamma_1-1}-\frac{\gamma_1}{\gamma_1-1}\right)\frac{1}{\gamma_1 M_1^2}\right], \quad \Lambda_1 = \left(\frac{(\gamma_1-1)M_1^2}{2+(\gamma_1-1)M_1^2}\right)^{1/2} \quad (4)$$

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ACC NR: AP6034532

where subscripts 1 and 2 denote regions before and after the detonation wave, and q is a parameter characterizing the heat release in the detonation wave. Fig. 1 shows the flow past a sphere or a semisphere attached to a cylinder. The broken lines represent the characteristics from the point where the semisphere is attached to the cylinder. The figure shows that with increasing q the detonation wave is displaced from the solid surface which is a similar to the effect obtained by decreasing the Mach number of an incident adiabatic flow. However, at a short distance the detonation wave assumes a flat shape corresponding to a Chapman-Jouguet detonation. It is concluded that the problem has a unique solution which depends on the selection of the point where the detonation wave disintegrates. For a zero thickness detonation wave this point cannot be determined. At a sufficiently high heat release the detonation wave approaches the Chapman-Jouguet condition. Therefore, in cases when the detonation wave disintegration the point of disnintegration will be located at a small distance from the solid surface. Orig. art. has: 8 figures and 7 formulas.

SUB CODE: 21/ SUBM DATE: 26May66/ ORIG REF: 003/ OTH REF: 005/ ATD PRESS: 5106

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ACCESSION NR: AT4042669 S/0000/63/000/000/0134/0135

AUTHOR: Gilinskiy, V. Ya.; Chapek, A. V.; Kozlova, A. G.; Kulikova, N. M.; Loshak, A. Ya.

TITLE: The effects of small concentrations of carbon monoxide on the human organism in airtight cabins of passenger aircraft

SOURCE: Konferentsiya po aviatsionnoy i kosmicheskoy meditsine, 1963. Aviatsionnaya i kosmicheskaya meditsina (Aviation and space medicine); materialy* konferentsii. Moscow, 1963, 134-135

TOPIC TAGS: carbon monoxide effect, pressure chamber, man, higher nervous activity, passenger aircraft

ABSTRACT: In order to study the effects of small concentrations of carbon monoxide, experiments were performed on 82 persons in pressure chambers and 185 persons in aircraft. Experiments have shown that after 3 hours, the presence of carbon monoxide in concentrations of 0.01 mg/l and higher causes certain negative shifts in the functional condition of a number of organs and systems. In the area of higher nervous activity, it was found that the presence of carbon monoxide resulted

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in a lowering of the ability to differentiate, a decrease in memory, a shortening of the attention span, and an increase in the time for carrying out assigned tasks. In the area of visual and vestibular analyzers, it caused an increase in the latent period, a diminution in the retention of the afterimage, and a diminution in the time of counter rotation illusion. In the metabolic processes, it caused changes in body temperature. In the cardiovascular system, it caused changes in arterial pressure, changes in the functions of the cardiac muscle, etc. It caused a weakening of the muscles. It caused formation of carboxyhemoglobin in the blood and other changes in the composition of blood elements. On the basis of these data, it is suggested that 0.01 mg/l of carbon monoxide be established as the maximum allowable in the cabins of passenger aircraft.

ASSOCIATION: none

SUBMITTED: 27Sep63 ENCL: 00 SUB CODE: LS

NO REF SOV: 000 OTHER: 000

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